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RESEARCH VISIBILITY. VOCATIONAL EDUCATION IS SERVICE--VOCATIONAL GUIDANCE.

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NINETEEN REVIEWS IN THIS ISSUE PERTAIN TO VOCATIONAL GUIDANCE AND ARE ORGANIZED BY TOPICS--(1) "SYSTEMS TECHNOLOGY IN GUIDANCE" REVIEWS AN EXPLORATORY STUDY OF INFORMATION PROCESSING PROCEDURES AND COMPUTER APPLICATIONS IN GUIDANCE, AND A CONFERENCE ON SYSTEMS DEVELOPMENT FOR VOCATIONAL GUIDANCE, (2) "CAREER DEVELOPMENT THEORY AND PRACTICE" TREATS GUIDANCE CURRICULUM PLANNING AND A CAREER SIMULATION GAME, (3) "COUNSELOR TRAINING PROGRAMS AND INSTITUTES" DESCRIBES NINE COUNSELOR TRAINING PROGRAMS, (4) "REGIONAL RESOURCES" DESCRIBES THE SAN DIEGO CAREER INFORMATION CENTER, AND (5) "EXPERIMENTS AND DEVELOPMENTAL STUDIES" REVIEWS A CREATIVE THINKING TEST VALIDATION STUDY, THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE ACHIEVEMENT MOTIVES IN VOCATIONAL EDUCATION, GUIDELINES FOR RESEARCH AND PRACTICE IN GUIDANCE, AN INSTRUMENT TO APPRAISE SOCIAL READINESS FOR EMPLOYMENT, AND A STUDY OF JUNIOR COLLEGE STUDENTS IN OCCUPATIONAL EDUCATION. "PLAIN TALK," A CONTINUING COLUMN, DISCUSSES SOME GAPS AND WEAKNESSES OF THE GUIDANCE PHASE OF VOCATIONAL EDUCATION AND WARNS THAT RELIANCE ON MAN-MACHINE SYSTEMS MAY CAUSE COUNSELORS TO LOSE THEIR ABILITY TO RELATE TO STUDENTS, RECOMMENDS MORE EMPHASIS ON THE THEORETICAL RATIONALE OF COUNSELING, AND POINTS OUT THAT THE JOB PLACEMENT PHASE HAD BEEN NEGLECTED. THE BIBLIOGRAPHY LISTS 16 RELATED STUDIES WHICH ARE IN PROCESS. THIS ARTICLE IS PUBLISHED IN THE "AMERICAN VOCATIONAL JOURNAL," VOLUME 43, NUMBER 3, MARCH 1968. (EM)

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RESEARCH VISIBILITY

SYNTHESIS / APPLICATION / DISSEMINATION

"Research Visibility" is a research project of the American Vocational Association. The purpose is to give visibility to significant research: experimental, demonstration and pilot programs; upgrading institutes, seminars and workshops; and other leadership development activities for teachers, supervisors and administrators. The "Research Visibility" report synthesizes important projects which have been reviewed, selected and analyzed for their value to

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Vocational Education Is Service . . .

Guidance has had a profound influence on American secondary education, especially during the past 20 years. Many practices that are now commonly employed in junior and senior high schools were first introduced by way of the guidance program. The widespread use of standardized tests, and their application in the classification, grouping, and counseling of students, are several typical examples.

Although it may be said that the guidance movement has brought many improvements to secondary education, it must also be admitted that its value to a large segment of the school population has been less than sensational. According to some recent studies, many students, especially those who were not preparing for college entrance, indicated that the guidance office had given them little or no significant counseling service.

Now, in a period when a full measure of guidance that is appropriate for all persons in all circumstances has been recognized among the imperatives in education, it is likely that a drastic change in form and emphasis will have to follow.

Early in the guidance movement, three basic objectives were established: the development of educational, personal and vocational competency. These fundamental goals have been sustained in theory. In practice, however, the major concern of guidance has been for college preparation and admission. Little time has been given to either the personal or vocational aspects of counseling. This college domination of the high school

Vocational Guidance

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Dr. Gordon F. Law is editor of "Research Visibility." The organization for this department of the JOURNAL, the pattern for reporting and the writing represent his work.

curriculum, which has had adverse effects on all levels of instruction and guidance, appears to be finally giving way to a more enlightened concern for individuals.

There are several publications, other than the Office of Education studies reported in this issue, which relate to guidance. These include the proceedings of the *First National Conference on Student Personnel Services in Area Vocational Schools*, available through the Georgia State Department of Education; the January 1968 *Bulletin* of the National Association of Secondary School Principals, and the publication of the University of Wisconsin Center for Studies in Vocational and Technical Education, *Guidance Bibliography No. IV, Addendum No. 4.*

The January 1968 NASSP *Bulletin* is exclusively devoted to "Progress in Pupil Personnel." The 10 articles, prepared by some of the national leaders in guidance work, are sources of insight and information, and at least 5 of them are concerned with topics that are closely related to vocational education.

For persons interested in studying a plan for career development in a major city, the Philadelphia public schools have prepared a publication, *Career Development*, which describes a program leading toward universal continuing education.

TOPIC ONE: Systems Technology in Guidance

Computer-Based Technology

7:1 "EXPLORATORY STUDY OF INFORMATION-PROCESSING PROCEDURES AND COMPUTER-BASED TECHNOLOGY IN VOCATIONAL COUNSELING" BY J. F. COGSWELL. SYSTEMS DEVELOPMENT CORPORATION, SANTA MONICA, CALIF. (PROJECT # 5-0141) 1967. (VT # 004-528) 256 PAGES.

The purpose of the Systems Development Corporation study was to design and implement a man-machine system for vocational guidance.

Five major steps were planned for the design phase. These were to: survey vocational guidance operations in the field; conduct a detailed system analysis of the counseling procedures employed at a selected field site; design a man-machine system by the counselors at the field site and the Systems Development Corporation research team; formulate and develop computer programs in the SDC laboratory, and collect initial evaluation data.

The survey of current counselor practices was conducted at a sample of 12 schools having vocational offerings. The basic instrument used to collect data on counselor activities was a card sort version of the Q-technique.

Counselors were given a brief overview of the project. They were then interviewed by members of the SDC research team. Following the interview, a card sort test was administered. Counselors were instructed to look through the 48 cards and sort them into three piles, in terms of the effort they spent on the counseling activities: "most effort," "some effort" and "no effort." A total of 87 counselors, 56 from post-secondary vocational institutions and 31 employed in comprehensive or vocational high schools, took part in the program.

Analysis of the card sort data indicated that a marked difference existed between what counselors are doing and what they would like to do. The findings from the survey supported the investigators' belief that counselors are forced to spend too much time with information-processing chores, "that ideally, they would like to change their activities in the humanistic direction of working more with students, and that they would like to alter the system to better meet the needs of students."

When looking for conditions that would assure a humanistic orientation, the researchers asked the counselors the question: "Is it possible to design a computer program system that is humanistically oriented?" The answer, based on logical and philosophical analysis, rather than hard empirical data, was a qualified 'yes.' The study proposed two primary rules for humanism in man-machine systems: the system shall exist for the convenience of—and to fulfill the needs of—the system, and the system must be respectful of the humanity of those who are processed by the system.

Speaking about the dangers of nonhumanistic use of computer systems for guidance work, the report identifies three of the more serious problems: *privacy of personal data; misuse of prediction systems*, and *alienation of humans subjected to computer processing.*

When discussing the fact that an individual has a right to privacy of personal data, the report recommends four conditions that should be observed: *right of access; right of knowledge of source; right of review, refutation and appeal*, and *right of approval of dissemination.*

"If a dossier or information file is to be kept on any person, that person should be notified of its existence and be allowed access to it at will; the subject of a dossier has the right to know the source of any information included in his file, and that such sources be recorded with the information; the person who is the subject of a dossier should be permitted to review and refute any information in the dossier, and that his refutation be included as an integral part of the dossier; and the subject of a dossier has the right to approve (or veto) the transfer of information from his file to other agencies, persons or files."

Two principal dangers are reported in the use of computer systems to generate predictions about students. These have to do with statistical prediction and the direction of students to follow courses of action. "Counselors often use statistical predictions to *direct* students to follow courses of action that lead to the fulfillment of the predictions. In such cases, false prediction models can become valid with the passage of time. The automation of such procedures is not an improvement."

The report also includes sections describing the design of the computer software systems, an ethical and moral analysis of the design for a man-machine counseling system and plans for the implementation phase of the program. An appendix of more than 100 pages gives a detailed accounting of the processes taken in the development of this study.

The SDC exploratory study of information-processing procedures and computer-based technology in vocational counseling should be required reading for any person with interests in guidance or systems in education. It is a disturbing and provocative report that poses some fundamental ques-

tions about the entire guidance process. In the summary statement of the report, the concerns of the investigators speak for themselves:

"As the study progressed, it became increasingly apparent that the introduction of the computer into the counseling operation could accelerate the already present trends toward alienation and depersonalization. Despite our efforts to focus the design on the functions that both the men and the machine would play in the new system, we found the major ideas that were developed in the design meetings were for the computer. Very little attention was given to what the counselor's role would be in the new system.

"This observation paralleled past experiences in the design of military man-machine systems. The counseling system was becoming more like a machine than either a man, or a system with functions equitably distributed to men and machine.

"Our concern for the role of the human became more acute when we analyzed some of our data on counselor attitudes. These data suggested that actual experience working as a guidance counselor in schools tends to increase the positive value placed on data manipulation. This observation caused us to fear that once the computer is installed the counselors will use the extra time that would be gained to become more involved with data than with students."

Systems Under Development

7:2 "SYSTEMS UNDER DEVELOPMENT FOR VOCATIONAL GUIDANCE" BY ROBERT E. CAMPBELL. OHIO STATE UNIVERSITY, COLUMBUS, OHIO. (PROJECT # 7-0158) 1966. ERIC # ED 011 039. MF $0.50 HC $2.80. 70 PAGES.

The Ohio State Research exchange conference on systems under development for vocational education was reported to be an unique experiment in research stimulation and coordination. The purposes of the conference were:

—To review experiences, problems and insights developed by the individual participants through research and use of these new technologies.

—To review the relation of these technologies to vocational education, vocational counseling and guidance.

—To arrange for continued communication among participants as they apply systems analysis and technology in vocational guidance, research and practice.

A group of 21 researchers met informally for two days to share problems and ideas in the development of new technologies and innovations for vocational guidance. Before the conference, each investigator had been involved in a research project relating to vocational guidance. These projects were classified into three groups: those devoted to the study of careers; projects for the development and presentation of materials for aiding career decisions, but not involving the use of computers; and, those concerned with the development of materials for the enhancement of career decisions with the assistance of time-shared computers.

Conference participants agreed that exchange during the conference was excellent: there was a sincere willingness for mutual exploration of problems and reciprocal assistance. They concurred that continued communication through a second conference would allow investigators to pursue difficult questions more deeply.

It was reported that systems development for guidance related activities was the topic participants wished to explore further. Special interest was expressed in systems to assist the individual in self-evaluation, support counselor activities, especially routine tasks and data storage, and survey the world of work in its many facets and complexities.

Participants felt they had just scratched the surface in identifying and discussing problems and issues in guidance related systems research. However, they did raise a number of important questions.

Model of Counseling Functioning. "As the building of a system progresses, theoretical decisions have to be met as to how people make vocational choices, the role of diagnosis, amount of self-direction. In building a model, does the researcher operationally simulate observed counselor activities, or does he develop a new model?"

Data Base Construction. "What kinds of information will a system need in order to accomplish its goals? For example, in providing information about vocational training opportunities, how should these be grouped, how much detail should be included, and at what points within a system's sequence should the material be introduced?"

Battery of Measurement Instruments. "What kinds of information should be obtained through tests and which tests are most appropriate to measure the appropriate traits . . . can systems be designed with enough flexibility to handle the complexities of test interpretation not only for singular tests but tests in combination?"

Taxonomy of Occupations and Descriptions. "This is basically a problem of how to classify and present educational and occupational information, e.g., nature of training, requirements for admission, job opportunities . . . To provide this exploration, a complex well-organized occupational classification system is needed . . . There are also problems relating to storing local, geographic or national trends and the continual difficulty of maintaining up-to-date information."

Other concerns expressed by conference participants related to the monitoring of systems by counselors and teachers; the influence that variations in educational settings and student populations would have, and the fundamental differences that exist between a taxonomy of occupations and a comprehensive examination of the world of work.

TOPIC TWO: Career Development Theory and Practice

Career Planning Curriculum

7:3 "GUIDANCE CURRICULUM FOR INCREASED SELF-UNDERSTANDING AND MOTIVATION FOR CAREER PLANNING" BY VIVIAN S. SHERMAN. AMERICAN INSTITUTES FOR RESEARCH, PALO ALTO, CALIF. (PROJECT # 5-0047) 1966. ERIC # ED 010 625. MF $0.25 HC $0.72. 18 PAGES.

The question of what vocational guidance curriculum experiences are appropriate for junior high school students was a major concern of this American Institutes for Research study. How the problem was pursued, what conclusions about curriculum needs were reached and what was proposed and developed comprised the content of this report.

The report acknowledges the considerable individual variation among

young persons' self-understanding and motivation toward career exploration. This suggests that guidance programs have not always been able to bring about adequate self development, so crucial to orientation toward and establishment in a career.

This study views guidance as "a structuring of situations conducive to internal reorganization of knowledge, understandings, attitudes and values" that would further growth within the individual. "If youngsters were given opportunity to project their own thoughts, feelings or experiences against those of others, perhaps with support and acceptance of a group whose members have problems similar to their own, they might gain insight into self."

The first step in curriculum design was the development of questionnaire items on the basis of the following six areas which relate to students' personal values:

1. Students' Perspectives of Purposes of Education and Key Problems Facing Them.
2. Status of Career Planning: individual students' planning, areas of interest, degree of specificity and careers considered.
3. Developmental Perspective of Self: individual variation due to heredity, influence of people and events, early interests.
4. Self Concept: important dimensions of self, influencing environmental-situational factors, self perceptions.
5. Relationship of Personality Characteristics to Occupations: occupational stereotypes, job requirements and opportunities.
6. Planning for Career Exploration: locus of responsibility, clarification of values and goals, clarification of plans.

It was reported that the statement of educational objectives in behavioral terms should be a basic concern of educators. "Specifying desired behavioral changes can clarify both the nature of learning experiences and procedures for evaluating the extent to which these changes occur."

Since attitudes involving the total individual was the realm for investigation, Krathwohl's taxonomy of affective objectives was used as a guide. "This classification system has not yet been widely used and needs practical application in order to evaluate its usefulness as an educational tool. It seemed especially suited to development of the social-emotional dimension of self. It rests upon the process of internalization and includes major categories of receiving or attending, responding, valuing, organization, and characterization by a value or value complex."

The result of this project is a completed set of vocational guidance curriculum materials developed to bring about increased self-understanding and career motivation in junior high school students. These materials, contained in a separate Appendix, are sequentially organized through daily lesson plans. Each lesson includes a statement of Objectives, Means of Eliciting Response and Evaluative Devices.

The Objectives outline specific behavioral responses, possible student attitudinal responses and cognitive processes demanded. Under Means of Eliciting Response are methodological considerations by the teacher, specific practices, plans, materials, verbal directions and statements, and relationship to developmental tasks or growth needs of the learner. The Evaluative Devices for each day are in the form of questionnaires, verbalized responses, comment sheets or observations.

The study suggests that these materials be used flexibly, since they are adaptable to different age and grade levels. However, they seem to be based on an inherently flawed premise. Attitudinal changes and self development for career orientation are vital objectives that may be better realized through a program of loosely designed units rather than daily lesson plans which presume to weigh and credit students' immediate behavioral "changes." Conducted by a directive teacher, this linear curriculum imposes a method of self realization which is fundamentally conformist, non-organic and not actually determined by the variety and involvement of the students.

Life Career Game

7:4 "CAREER SIMULATION FOR SIXTH GRADE PUPILS" BY R. GARRY SHIRTS. DEPARTMENT OF EDUCATION, SAN DIEGO, CALIF. (PROJECT # 5-0123) 1966. ERIC # ED 010 076. MF $0.25 HC $1.64. 41 PAGES.

In considering the career development of younger pupils the principal investigator, R. Garry Shirts, speculated that the Life Career Game might prepare students to gain a better view of the career decisions they would face in the future. It might also help them to realize how their decisions would relate to their forthcoming school program. Consequently, Shirts and others developed and conducted a two-part pilot project which involved sixth grade pupils.

During the developmental part of the project, the Hopkins version of the Life Career Game was modified and simplified. The adaptation seemed more appropriate for sixth graders.

The second or research phase of the study was designed to determine if the modified game would change sixth grade pupils' attitudes toward education and the world of work and/or increase their knowledge about the career process. The Vocational Development Inventory (VDI), developed by John Crites of Iowa, and the Vocational Information Achievement Test (VIAT), developed as part of the project, were used as measures of attitudinal change and information acquisition.

The experimental design included a treatment group of three classes selected randomly from 56 sixth grade classes in the Cajon Valley Union and Santee School Districts of California, and a control group of three classes selected from the same population. The treatment group played the modified version of the Life Career Game for 15 hours over the period of a month. During the same period the control group was taught the regular sixth grade curriculum which did not involve a systematic study of career development.

The final field study was conducted in four classrooms. Two of the classes played the game twice, using different profiles, while the other two completed only one profile game. The two classes which were able to complete two profiles played once with the scoring procedures and once without them.

Information and ideas about the game during the field test were obtained through interviews of pupils and teachers and visits to classes. Teachers kept records of all questions asked by pupils. At the conclusion of the field test, teachers participated in a half-day critique. Following are some of the comments derived from the field testing:

The interviews with pupils were not very productive. However, some things were learned, including the following:

The slower pupils felt somewhat frustrated because they could not understand parts of the game. All pupils felt that the game was "a lot of fun" and that they were "learning a lot." Several suggestions on how to improve technical aspects of the game were made.

The teacher interviews revealed a strong liking for the game. Several suggestions were made for improving the game's technical quality. Observers were impressed that pupils were able to work by themselves with little control or direction. Some doubts were expressed about the readiness of sixth grade pupils for instruction on vocations and career decisions.

It was reported that the experimentation failed to obtain significant differences between the control and experimental groups on the pre-treatment and post-treatment scores. In the opinion of the investigator, the most likely explanation for the non-appearance of significant differences is attributable to the age and maturity of sixth grade pupils. "Although the need for and value of some sort of vocational education in the elementary school has been pointed out many times, it is possible that such experiences, to be meaningful to sixth grade pupils, cannot project as far into the future as the career game attempted to do."

TOPIC THREE: Counselor Training Programs and Institutes

Counselor Training Program

7:5 "A TRAINING PROGRAM FOR VOCATIONAL COUNSELORS" BY DONALD L. FRICK. COLORADO STATE UNIVERSITY, FORT COLLINS, COLO. (PROJECT # 5-0054) 1966. (VT # 004-203) 26 PAGES.

The Colorado State training program for vocational counselors was held for four weeks during the summer of 1965. Thirty secondary school counselors were selected on the basis of needed vocational counseling in the communities they represented. Major emphasis of the program centered around the philosophy and content of vocational education.

The threefold purpose of the training program was to develop in each trainee the ability to make practical application of vocational counseling techniques in his local community; inform trainees concerning the provisions and implications of federal legislation dealing with vocational training of youth and adults, and provide trainees with the information they need to give intelligent counseling for individuals at various levels of educational attainment.

A large portion of the program was devoted to counseling interview sessions in which the trainees gained experience counseling youths and adults faced with vocational selection and training problems. The instruction also included classes relating to federal legislation for vocational education, visits to vocational training programs in operation, and presentations by resource persons from business, labor, community groups, and industry.

The culminating activity was an individual project in which each trainee developed a community action plan to meet the needs of his home situation.

Second Training Program

7:10 "A TRAINING PROGRAM FOR VOCATIONAL COUNSELORS" BY DONALD L. FRICK. COLORADO STATE UNIVERSITY, FORT COLLINS, COLO. (PROJECT # 6-1592) 1967. (VT # 002-871) 45 PAGES.

The second Colorado State training program for vocational counselors, conducted during a five-week summer session in 1966, had a similar format to the program that was held during the previous summer.

Twenty-one school counselors from four states were selected on the basis of type of community, nature of present assignment and the need for training to perform this assignment.

During the first two weeks on the campus of the University, intensive formal presentations were made by staff and resource personnel on the philosophy and structure of vocational education and occupational information services. Formal instruction was supplemented with group discussions, demonstration interviews and further study of personality factors and counseling theory and practices.

The third and fourth weeks were held at the Emily Griffith Opportunity School in Denver, a public vocational-technical school for youths and adults of all ages. During this period most time was spent in counseling interviews with students of the school. This core experience was supplemented by field trips to business and industry.

The counselors reported that the training program had indeed been a significant experience. They stated that their background orientation to the world of work and aspects of vocational development had been inadequate and that, prior to their participation in the program, they had not been aware of the possibilities for vocational training.

The main value of the two Colorado State guidance training programs is that they have approached the problem of counselors' lack of knowledge about vocational education directly and practically. The testimony of participants reveals that guidance counselors who have had neither special preparation nor first hand experience in vocational counseling and teaching need basic instruction.

The field experience at Denver's Emily Griffith Opportunity School was an important phase of both programs. Trainees thus gained experience in testing, interviewing and counseling in life situations with young people and adults from a broad range of educational backgrounds and varied occupational aspirations. Another significant benefit of this experience was that counselors enrolled in the training programs had the opportunity to observe a quality vocational program in operation.

Counseling the Disadvantaged

7:6 "COUNSELOR INSTITUTE AND FOLLOW-UP WORKSHOPS" BY HOWARD E. MITCHELL. UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA. (PROJECT # 5-0112) 1965. ERIC # ED 010 281. MF $0.50 HC $4.92. 123 PAGES.

This report deals with a program to improve the effectiveness of high school counselors in their vocational

guidance work with low-income youth. Citing the comments from business, industry, labor, government, and education, the report states that "our presently inadequate vocational guidance program for low-income youth has two major deficiencies.

"1. The school counselors, as a group, often lack essential knowledge about low-income, disadvantaged youth.

"2. The limited rapport between the business-industrial complex and the school vocational guidance program has partially resulted in a potential labor force with 'improper' attitudes about employment and its relationship to education. Furthermore, it is apparent that industrial leadership has limited knowledge concerning the role of the school counselor."

The counselor training program, conducted as part of the Human Resource Program (HRP), University of Pennsylvania, consisted of a three-week summer institute and a follow-up and program evaluation.

The objectives were to:

—Enhance counselors' understanding of the attitudes which culturally deprived youth have toward matters such as employment, education, family life, and the world beyond their experience.

—Increase counselors' knowledge about changing employment conditions and opportunities.

—Assist in the development of an improved liaison between school guidance counselors and industrial personnel.

A total of 50 guidance counselors, 44 of whom were from the Philadelphia public school system, participated in the summer session. The Institute was comprised of four main activities: lectures by visiting specialists and HRP staff members; panel discussions involving counselors, high school students, industry representatives, government personnel, and academicians; field trips to 14 Philadelphia area industries, and unit group discussions in which participants conversed about the lectures and field trips.

During the next school year, two workshop sessions were held (November and March). At the first workshop, attention was given to guidance programs for the culturally deprived in other urban communities. At the later session, new approaches for improving the competence of guidance personnel were discussed.

A newsletter, *Focus-On-Progress*, was published as part of the University of Pennsylvania project. Distributed five times during the year, it contained materials to acquaint counselors with new trends in guidance and counseling which would be of interest to urban school counselors serving low-income families. Although the actual editing and publishing of *Focus-On-Progress* was done by the HRP staff, counselors were actively engaged in collecting material and deciding what should be published.

Vocational Guidance Conference

7:7 "NEW DIRECTIONS IN VOCATIONAL GUIDANCE" BY PHYLLIS C. WILSON. QUEENS COLLEGE OF THE CITY UNIVERSITY OF NEW YORK, NEW YORK, N. Y. (PROJECT # 5-0184) 1965. ERIC # ED 003 099. MF $0.50 HC $4.68. 117 PAGES.

"In the present rapid advance of automation, urban concentration and general industrial change, counselor educators are severely challenged in providing school guidance trainees with pertinent courses in vocational counseling. Forward-looking courses must evolve from up-to-date knowledge and enlightened point of view on the part of the faculty." So urged Dr. Phyllis C. Wilson, coordinator, guidance and school counseling, Queens College, when introducing the purpose for the counselor educator's institute.

The report of this six-day institute contains the papers of six principal speakers and the summary address by Dr. Pierson, dean and director of student personnel, Queens College. The program outline and rosters of registrants, guests and other participants are also included.

In the first address, "Project People or Project Program," given by Hubert Houghton of the U.S. Office of Education, the importance of assisting each person in developing his maximum potential is stressed. "Counselors must assist youth to develop sound self-appraisal techniques that can be used throughout life—indirect and informal ones in the early school years, increasingly direct and comprehensive ones later."

Also contained in this address is an operational definition of vocational guidance, extracted from the March 1965 issue of the National Vocational Guidance Association Newsletter:

> Vocational guidance includes use of the teaching and counseling processes by which a professionally trained individual works with another person or group of persons, irrespective of age or employment setting, to: (a) broaden his knowledge and understanding of the place of work in the socio-economic pattern of societal and cultural development; (b) aid and assist him in obtaining factual data and in gaining realistic insight and knowledges, abilities, skills, attitudes, interests and characteristics, and the relationship of these to job election, satisfaction and performance, and, (c) help plan a future course of action.

Other presentations recorded in this report relate to employment trends, labor's view, problems of increased urbanization, effects of rapid change on personality, and the technological impact on society.

In his summary remarks, Dean Pierson states that counselor training should be interdisciplinary in character. "Greater emphasis must be placed upon the behavioral and social sciences and upon philosophy, theory and research. Techniques of counseling, testing and job analysis are not enough."

This report calls attention to the fact that occupational orientation is becoming a major topic among many persons involved in the preparation of school guidance counselors. The array of participants who are prominent in guidance education circles, as well as the group of distinguished guests and observers, is testimony to the growing stature of vocational guidance. Of particular significance in this and other related reports is the concept that all young people need instruction relating directly to the world of work.

Short Course for Counselors

7:8 "SHORT COURSE FOR COUNSELORS ON VOCATIONAL-TECHNICAL TRAINING AND OPPORTUNITIES" BY FRED D. HOLT. UNIVERSITY OF GEORGIA, ATHENS, GA. (PROJECT # 5-0875) 1965. ERIC # ED 003 108. MF $0.18 HC $3.88. 97 PAGES.

The three-week course on vocational and technical training and opportunities, conducted by the University of Georgia for 25 counselors, had four main objectives:

1. To develop an increased awareness of the diversity of the vocational and technical world of work.

2. To develop an understanding and recognition of the value and potential contribution of the vocational and technical schools.

3. To develop familiarity with the demands of both large and small industries and businesses in terms of desirable employee characteristics and become more cognizant of the situations in which new employees find themselves.

4. To develop a more comprehensive understanding of the interaction of the social and psychological forces which affect man and his work.

The basic instructional program involved large and small group discussions, lectures, field trips, and group meetings. Considerable attention was given to theoretical aspects of vocational development, with particular emphasis directed toward the sociological and psychological factors which affect man in the world of work.

The instructional staff of 4 was augmented by 10 consultants and 6 off-campus personnel. Participants were taught by specialists in sociology, psychology, social work, and counselor education. Representatives from the U. S. Office of Education, a labor union, the U. S. Department of Labor, and other organizations also took part in the program.

Approximately one-third of the total time was devoted to field trips to vocational-technical schools, large and small industries and businesses. Prior to all trips, preparations were made to help determine the intended value of the experience.

Seven findings, together with a tabulation of participants' comments, are contained in the summary section of this report. The findings were concerned with the role of the counselor, relationship between schools and business and industry, training facilities and opportunities available, automation, and prevalent attitudes toward blue collar work.

In addition, the report includes transcripts of reports compiled by groups of participants. These presentations deal mainly with theories of vocational development and dissemination of vocational-technical information. Each report contains a digest of the topics considered in group activity and a bibliography of related references.

Statements in the section on dissemination of occupational and education information advise that the student should leave high school with personal skills in the informal evaluation of ideas, concepts and information.

"He should possess an objective viewpoint which will allow him to survey collected data about himself, his attributes and his talents, and the ability to use this in all decision-making processes. This skill should serve him throughout his life and permit him to relate growing self knowledge to new and complex situations.

"In the occupational information course, the counseling process should be supplemented by *role playing, dramatizations, work experiences, situational workshops, personal interviews,* and the *collection of related data* from many available sources."

Counselor Education

7:9 "VOCATIONAL ASPECTS OF COUNSELOR EDUCATION" BY CARL MCDANIELS. THE GEORGE WASHINGTON UNIVERSITY, WASHINGTON, D.C. (PROJECT # 5-1208) 1965. ERIC # ED 010 016. MF $1.00 HC $8.00. 200 PAGES.

The George Washington University conference on the vocational aspects of counselor education brought 31 leading educators together for a three-day session. The report contains transcripts of five papers presented during the conference and the summations of three work group sessions.

The report states that the background papers represent the views of the writers on previously selected topics. There is a wealth of information contained in these papers—much food for thought and ample material for numerous studies which can be pursued at various educational levels.

Kenneth B. Hoyt, The University of Iowa, presented a paper, "Needed Counselor Competencies in Vocational Aspects of Counseling and Guidance," dealing with skills, knowledge and attitude which should apply to a *majority* of counselors in a *majority* of school settings.

When speaking of the importance of counselor attitude in vocational counseling of all students, Hoyt states that counselors need to recognize the necessity of devoting concentrated attention to students who choose to do something other than attend college. "Counselors cannot become effective change agents in our society if they accept general societal biases as they presently exist. The current popular notion that the 'best' thing a student could do would be to attend college is one that counselors should be actively seeking to change."

Another important point made by Hoyt is the idea that counselors must recognize the kinds of personal values necessary for those individuals who could profit from vocational guidance.

A status report of current training approaches, format materials and curriculum content by R. Wray Strowig and Philip A. Perrone of the University of Wisconsin is based on a nationwide questionnaire which had been sent to counselor educators, state guidance supervisors and city guidance directors. This survey revealed that there is considerable room for improvement in total programs and in their component details. Suggestions for better field experiences of guidance trainees and for a closer integration of learning, research and service, are among the recommendations.

Henry Borow of the University of Minnesota delivered a report on research in vocational development which alludes to the growing dissatisfaction with the classical trait-measurement approach to vocational guidance, and it traces the development of subsequent models. The discussion treats the concepts of psychological life stages, career pattern, vocational development tasks, self identification and occupational role models, and some of the benchmark studies from which the concepts were developed.

Borow states that no simple, clearly discernable relationship may be claimed to exist between research discovery in the field of vocational development and the need for curriculum revision and new training methods in counselor education. "Nonetheless, one can hardly dispute the claim that our expanding views of occupational behavior call for a searching reappraisal of counselor education programs with a view toward effecting substantial modification both in content and method."

The report concludes with nine specific recommendations, mainly dealing with the improvement of counselor education.

University of Oregon educator, John Loughary, in proposing new developments in vocational aspects of counselor education, stresses the importance of counselor behavior in the process of vocational development. While recognizing the potential value of computer-based systems for the processing of occupational information, Loughary places them in proper perspective in his concluding state-

ment. "It must be noted that the one most significant determining factor regarding new developments in vocational aspects of counselor education is the counselor educator."

The fifth paper, "Manpower Legislation of the Sixties: A Threat and a Promise," was prepared by Theodore J. Cote, director of professional services, Division of Vocational Education, New Jersey State Department of Education. In this, the major provisions of federal legislation relating to manpower employment and vocational education are discussed in the light of their implications to counselor education.

In his summarizing remarks, the author states that manpower legislation of the sixties proposes to improve the conditions of people through the combined efforts of counseling and training. "In so doing, it redirects the emphasis of the counseling program to the vocational aspects of guidance and the efforts of counselors to the so-called average and below-average or otherwise disadvantaged student."

The conference report contains a number of interesting topics and positions. Materials presented should have value for vocational counselors and their instructors. At a time when preoccupation in Systems approaches to teaching and counseling often seems to subordinate the importance of persons who do the job, it is encouraging to find a series of presentations and discussions which concentrate on strengthening the qualities and qualifications of counselors.

Rural Guidance Workers

7:11 "VOCATIONAL-EDUCATIONAL INFORMATION WORKSHOP FOR RURAL GUIDANCE WORKERS" BY K. NORMAN SEVERINSEN. WESTERN ILLINOIS UNIVERSITY, MACOMB, ILL. (PROJECT # 6-2208) 1967. (VT # 004-178) 103 PAGES.

The demand for farmers and farm workers has steadily decreased. Consequently, rural students need to know about other job opportunities and the environment of urban communities. However, as the report indicates, only a small proportion of school counselors are equipped to advise students in rural areas of urban employment possibilities.

The chief emphasis of this project was placed on giving counselors information about jobs and employment certificate requirements in Illinois, Iowa and Missouri. Specialists in these areas were brought to the campus, and counselors were encouraged to develop new approaches in the dissemination of information to their students. The main objectives of the project, then, were to attack the problem of inadequate knowledge of vocational and educational information among rural guidance workers and to assess the method to be used.

The project consisted of three phases: the *training* phase where counselors were exposed to concrete vocational information and encouraged to plan new activities; the *implementation* phase where counselors were encouraged in their plans through four "drive-in" conferences conducted throughout the school year, and the *evaluation* phase when participants and staff opinions were surveyed, and the effects of the new services on students were measured.

After the two-week workshop was publicized through mailings, 23 applicants were accepted in the program. Specialists, particularly those in trade and technical occupations, were selected as speakers. Participants in the workshop, extending from Aug. 15 to 26, 1966, were expected to evaluate each session. They were also asked to assist in the development of a vocational information test and a career questionnaire for students.

These 50-minute Vocational Knowledge Tests were objective multiple choice instruments, having two forms for pre- and post-testing. A career questionnaire, designed for machine scoring, was developed to evaluate vocational attitudes of the students. The tests were administered to students at the schools of the participants and at two high schools serving as controls.

The subjective evaluation by the counselors revealed that the goals of the project were accomplished, since the counselors were generally favorable to the workshop.

The Vocational Knowledge Test revealed that students, especially in grades 11 and 12, benefited significantly from increased informational services. However, evidence showed no measured effect of these services on students' attitudes. Changes in attitude seemed to be due to variables other than increased counselor efforts.

Since the workshop stimulated counselors and increased their knowledge, the report stated that such workshops, scheduled just prior to the school year, can be quite influential in stepping up guidance activities in rural schools. The study recommends similar inservice projects for counselors and the use of consultants in these programs.

The study further recommends that tests of vocational knowledge should be refined to determine the value of such testing in research and guidance. Since the measurement of vocational attitudes has not been actively explored, the report suggests that fuure inservice workshops might be devoted to this problem.

Health Career Institute

7:12 "GUIDANCE COUNSELOR INSTITUTE FOR HEALTH CAREERS" BY PHILIP W. MORGAN. UNITED HOSPITAL FUND OF NEW YORK, NEW YORK, N. Y. (PROJECT # 6-2209) 1966. ERIC # ED 012 342. MF $1.00 HC $8.92. 223 PAGES.

The perennial manpower shortage in the health field has been compounded in recent years by the proliferation of jobs arising from new treatment techniques and fields of knowledge, and by increasing public demands for expanded health services.

Recognizing that high school guidance counselors are in a strategic position to stimulate interest and circulate information on health careers, the Advisory Committee of the United Hospital Fund of New York initiated a 12-day counselor institute on career opportunities that are found in the health field.

The Institute gave attention to the full range of health occupations, including professional and ancillary categories. The program was comprised of a series of major addresses, visits to a variety of health facilities, classroom and small group discussions, and the distribution of literature. Altogether, 48 high school and employment service counselors from New York City participated.

In an attempt to gain prior insight into the knowledge of health careers possessed by city vocational guidance counselors, a questionnaire was sent to 800 secondary school counselors. Responses showed the greatest deficiency of materials and knowledge to be in the area of ancillary or paramedic careers. It was further noted that none of the respondents felt he had sufficient information about any of the 38 careers listed. As a consequence, the

Institute focused attention on the full range of health occupations.

The agenda included 19 major addresses, given mainly by administrative officers and professors from hospitals and professional schools and organizations. Two full days were spent visiting New York Hospital, where staff members from different departments spoke on various hospital careers.

Edward Linzer, executive director, Mental Health Center, discussed the scope of new developments in the mental health field and the variety of emerging career opportunities associated with them. He explained that the seven major categories of persons who work in the mental health field function as psychiatrists, psychiatric social workers, clinical psychologists, occupational therapists, recreational specialists, psychiatric nurses, and psychiatric aides.

A visit to the Columbia University School of Dental and Oral Surgery included a tour of the facilities and two film showings, "The Challenge of Dentistry" and "Opportunities in Dentistry." Visitors were given papers describing career opportunities in dental hygiene, dentistry and related fields.

Duties of the trained dental assistant were described in a presentation by Dr. George O'Grady, assistant professor of dentistry. He stated that the formal training of dental assistants is a recent development. "In the past, a dental assistant received on-the-job training from her employer. This system was known as the blind leading the blind. He didn't know what to teach her, and she didn't know what to do."

Participants in the health careers program also visited the Institute of Physical Medicine and Rehabilitation in New York City and Squibb Pharmaceutical Laboratories, New Brunswick, N. J.

The Guidance Counselor Institute for Health Careers revealed to the United Hospital Fund, through its various phases of preliminary discussions and questionnaires, that there are severe shortcomings in the guidance services as they currently exist. "There is a critical need for programs designed to give guidance counselors more information on health careers. It is also obvious that there is a need for better occupational material to be presented to counselors in a variety of ways."

Counselor Training Program

7:13 "TRAINING INSTITUTE FOR VOCATIONAL GUIDANCE AND COUNSELING PERSONNEL" BY FRANK E. WELLMAN. UNIVERSITY OF MISSOURI, COLUMBIA, MO. (PROJECT # 6-2212) 1966. ERIC # ED 011 614. MF $0.18 HC $4.28. 107 PAGES.

This four-week training institute for vocational guidance personnel, conducted by the University of Missouri, provided instruction for 40 trainees from 12 North Central states. The general purpose of the project was to develop understandings, knowledge and professional materials with respect to:

1. Economic factors influencing the need for vocational and technical education, and the vocational decision-making process among youth and adults.

2. Social and cultural factors related to the vocational counseling of youth and adults.

3. Psychological factors related to the career development and vocational choices of noncollege-bound students.

4. Administrative considerations in the evaluation of economic, social, cultural, and psychological factors in program organization, as well as in the coordination of vocational counseling activities of the various local, state and federal agencies.

The Institute provided 30 hours of scheduled activities each week. Half of the time was devoted to lectures and discussion of vocational counseling in the areas of economics, sociology, psychology, and administration. The remaining time was spent in small group sessions where papers were prepared on assigned topics.

The basic instructional staff was comprised of faculty from the University of Missouri Departments of Economics, Education and Sociology. Representatives of the U. S. Office of Education, the U. S. Department of Labor, local school systems, and other college personnel served as special consultants.

The report contains outlines of the various instructional phases of the program—economic, social, psychological and administrative dimensions of vocational counseling. The content and structure of the Institute was said to be unique as an approach to training vocational guidance and counseling personnel. "The inclusions of multidisciplinary content within one concentrated training period has seldom been attempted, and the indirect approach to the improvement of the work of vocational counselors through supervisory training has not been exploited in the field of guidance and counseling."

Trainees and staff favorably evaluated this new approach. It was reported that the major strengths were the high quality of trainees, appropriateness of curriculum content, program format, and the stature of instructional staff members.

TOPIC FOUR: Regional Resources

Job Information Center

7:14 "REGIONAL CENTER FOR COLLECTION, SYNTHESIS AND DISSEMINATION OF CAREER INFORMATION FOR USE BY SCHOOLS OF SAN DIEGO COUNTY" BY EDWIN A. WHITFIELD AND RICHARD HOOVER. DEPARTMENT OF EDUCATION, SAN DIEGO, CALIF. (PROJECT # 6-1620) 1967. (VT # 004-123) 153 PAGES.

The developmental phase of the San Diego County Career Information Center, conducted from July 1, 1966, through June 30, 1967, is the substance of this report. During this period, career information was produced for all occupations requiring less than a baccalaureate degree for which training within the County was available. This resulted in approximately 200 eight-page descriptions. This material was distributed to 12 participating schools, and an evaluation of the materials and dissemination procedures was obtained from students, counselors and school officials.

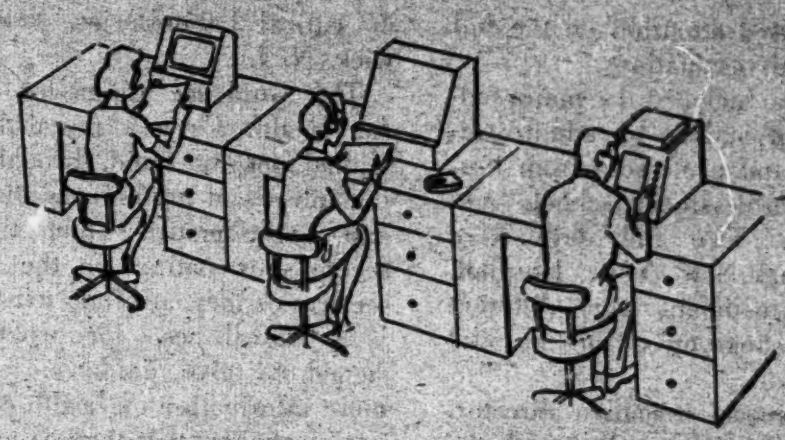
The dissemination vehicle used was a system based on the microfilm aperture card. A two-card format was chosen for each occupation. The first card contained four pages of general information; the second card, local information. Each school was supplied a microfilm reader and a reader-printer which enabled students to project microfilm copy on a screen and, if desired, print out hard copy. In addition, parameters pertinent to the occupation, such as aptitudes, length of train-

ing and restrictions, were key-punched into each aperture card.

The main body of information for each occupation was prepared in a standardized format suitable for conversion into microfilm form. Each brief was referred to as a VIEW script (VIEW standing for Vocational Information for Education and Work). Each pair of briefs for an occupation was put on microfilm.

The evaluation of the VIEW materials and their use in the pilot schools involved several phases, each utilizing a different evaluation instrument. The reactions of participating students, pilot school counselors and summer counselors were obtained through a questionnaire and group meetings. Each school counselor in San Diego County was also asked to evaluate the document known as "VIEWPOINT, Entry Employment in San Diego."

Students who had used VIEW materials, as well as other types of occupational information, reported that VIEW materials were more helpful, understandable, realistic, interesting, complete, and up-to-date. A later evaluation by high school students generally



supported the reactions obtained in the first instance.

The 21 counselors queried indicated that, in their estimation, student reaction to VIEW scripts had been either "favorable" or "very favorable." It was further reported that there was increased use of other vocational materials and that there appeared to be more interest in vocational guidance by the total school staff.

Among the specific needs revealed through this study is one for more counseling and guidance for students who do not plan to attend a four-year college. "This was emphasized by the large percentage of students who received jobs unrelated to their training, who changed majors after once entering the junior college, who felt they were not using their ability to their best advantage on the job they held, or who changed jobs within one year after their junior college training."

It was generally concluded that occupational information disseminated via aperture cards proved to be valuable and useful to both students and counselors. With a concentrated effort on the part of guidance personnel working with students, this system can be utilized to provide an even more effective vocational service in the schools.

TOPIC FIVE: Experiments and Developmental Studies

Tests for Creativity

7:15 "A STUDY OF THE CONCURRENT VALIDITY OF THE MINNESOTA TESTS OF CREATIVE THINKING, ABBR. FORM VII, FOR EIGHTH GRADE INDUSTRIAL ARTS STUDENTS" BY LESTER G. DUENK. UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN. (PROJECT # 5-0113) 1966. (VT # 002-740) 230 PAGES.

The primary concern of this study was to establish the concurrent validity of the Minnesota Tests of Creative Thinking, Abbr. Form VII, by determining the relationships between its scores and criteria measures based upon industrial arts oriented, creative performance tests developed by the investigator. A secondary objective was to determine the relationships between measures of creative abilities based upon accumulated teacher ratings of observed student behaviors as they occurred in typical industrial arts classes and those acquired through the use of the investigator's instruments.

Other purposes of the study were to estimate the relationships among measures of creative abilities in industrial arts as determined by: teacher ratings of typical performance in industrial arts; the investigator's specialized performance test approach, and the Minnesota Tests of Creative Thinking, Abbr. Form VII.

The population sample included 129 eighth grade boys who were receiving industrial arts instruction in two suburban junior high schools at St. Paul, Minn.

A specialized performance test of creativity abilities, developed by Jerome Moss, had previously been used in an investigation in which typical classroom performance measures were employed as the criteria of creativity. This test was constructed by the investigator and administered to the sample. The Minnesota Tests of Creative Thinking were also administered at approximately the same time. Descriptive data gathered from cumulative records included intelligence scores, average grades in seventh grade English, social studies, mathematics, industrial arts, and art, and achievement test scores in reading, social studies, writing, mathematics, and science. Personality rating scales were also obtained.

Pearson product-moment correlational techniques were used to estimate the concurrent validity of the Minnesota Tests as well as the relationships between measures of creative abilities, I.Q., achievement, and personality.

The findings of this study revealed that few significant relationships were established between MTCT and industrial arts test scores. It was speculated that "creative thinking" involving specific industrial arts related subject matter may be tapping different or additional characteristics than the "creative thinking" involved in responding to the non-specialized content of paper and pencil tests.

The study states that industrial educators may be wise to use the word "creativity" with caution, for without proper qualification, reference to creative production becomes quite ambiguous. "The artistic student who can express creative talent in an article of esthetic beauty may not necessarily be capable of planning a creative approach to a machine production problem or to a situation which calls for unusual interpersonal relationships."

Motivating Students

7:16 "MOTIVES INFLUENCING NEEDS TO ACHIEVE IN VOCATIONAL EDUCATION" BY FRANCES B. HELTZEL. CORNELL UNIVERSITY, ITHACA, N. Y. (PROJECT # 5-0157) 1966. ERIC # ED 010 295. MF $0.20 HC $1.88. 47 PAGES.

Forces affecting the motivation of high school students are numerous, varied, complex, and extremely difficult to measure. Continued study into this all-important aspect of learning should lead to improvements in teaching effectiveness. And for guidance counselors, constantly assisting students to make educational choices, a better understanding of relationships between motivation and school achievement is desirable.

The Cornell University study of motives influencing needs to achieve in vocational education, although failing to obtain conclusive findings, should serve as an important step in the accumulation of knowledge about this subject.

Objectives were: to construct an instrument to elicit basic motives as categorized by Maslow and measure their strength, using Krathwohl's taxonomy of affect levels; and, to measure experimentally induced motivation in terms of affect, level of aspiration and effort criteria.

Two hypotheses were tested. A task perceived as highly relevant for one's vocational preference and for which one correctly perceives oneself as competent, will elicit a higher level of affect.

The relationship of affect and its antecedents—career-relevance of task, self concept and observed ability—will vary with different subgroups of sex, SES and grade level when grade point average is controlled.

Parallel instruments of 42 items were constructed to measure motives for striving, based on Maslow's hierarchy of needs for security, belongingness, esteem, and self-actualization. The strength of each motive was measured according to Krathwohl's taxonomic levels of responding, valuing, organization of values, and characterization by a value. Subsequent to pretesting procedures, a 20-item test was devised.

Experimentation was designed to provide a validation of the instrument by creating different motivation levels through the manipulation of specific variables: performance score, self concept and task relevance. A total of 214

tenth and twelfth graders in Elmira, N.Y., were tested. An item analysis based on low- and high-scoring students showed that items written at seven of the nine Krathwohl levels discriminated satisfactorily.

It was reported that only pretest results can be given as the research had to be terminated at that stage. "The final pretest results indicated that items written to measure different levels of affect did discriminate satisfactorily; they did not fall into the predicted difficulty levels hypothesized by Krathwohl's hierarchy. However, ... efforts to continue the research beyond the pretest phase proved abortive.

"Further attempts to validate the affect instrument through concurrent administration of Finger's Personal Values Inventory, yielding a persistent score, and French's Test of Insight, measuring need-achievement, likewise proved futile."

Research and Practice Guidelines

7:17 "GUIDANCE IN VOCATIONAL EDUCATION: GUIDELINES FOR RESEARCH AND PRACTICE" BY ROBERT E. CAMPBELL. OHIO STATE UNIVERSITY, COLUMBUS, OHIO. (PROJECT # 5-0212) 1966. ERIC # ED 011 922. MF $0.75 HC $7.60. 190 PAGES.

The Ohio State Center for Research and Leadership Development in Vocational and Technical Education, responding to the growing need for effective programs of vocational guidance, invited nationally recognized leaders from several disciplines throughout the country to develop guidelines for initiating and improving such programs.

The stated major purpose of the three-day seminar was to provide an opportunity for leaders in vocational education, guidance and related disciplines to pool their resources and thinking in formulating plans for initiating and improving programs of research and practice. Among the overall goals were those to stimulate interdisciplinary research and interest, evaluate the status of vocational guidance and identify specific problem areas, and reduce the time lag between research, theory and practice.

The report contains transcripts of the major presentations made at the seminar, together with the comments of reaction speakers. Also included is a directory of 37 consultants and 190 participants, and the schedule of group discussions.

In the summary section are listed 7 guidelines for guidance practice and 14 guidelines for areas of needed research on guidance in vocational education.

Guidelines for Practice

- Guidance is a process of helping the individual to examine his life experiences to the end that he may know and choose himself and his actions more clearly and purposefully.
- Both teachers and counselors have roles to play in guidance, but the counselor should make a unique contribution to the vocational program.
- The educational-vocational framework provides the most logical rationale for pursuing discovery of self.
- The criterion to be employed in defining the role and functions of the counselor in vocational education is psychological consistency.
- There is a job for both vocational educator and counselor in providing experiences which enable the student to identify suitable social work-roles.
- The myth of the individual with a single occupational value can no longer be supported as a basis for vocational guidance practice.
- Guidance in vocational education cannot escape its responsibility to develop the abilities and talents of *all* individuals.

Identifying Areas of Needed Research on Guidance in Vocational Education

- Since many of the attributes learned in early childhood, such as concepts of mastery, coping behavior and achievement motivation, bear upon later vocational planning and adjustment, more research is needed on younger children so that we may discover the conditions under which these traits are learned.
- The values that people hold about occupations are culturally ac-

quired. However, we do not yet understand very much about the psychological processes by which this acquisition occurs. Research needs to be designed that will reveal how children, for example, develop their occupational valuing system as well as their generalized vocational motives.

• As new fields emerge and the nature of the industrial order becomes increasingly complex, it becomes more important that those responsible for vocational curriculum construction, training and counseling have access to improved systems for the classification of occupations.

• A larger percentage of secondary school and post-secondary school students hold part-time jobs than at any time previously. Experience with such work is logically expected to assist youths with problems of realistic vocational planning, but we suspect that this expectation is not generally borne out by the facts. Research is needed to compare the vocational maturity status of youth who have had outside work experience with those who lack such experience.

• While research has emphasized chiefly the influence of trained counselors upon the vocational plans of students, investigations are needed which will study the impact of other adults and authority figures on the vocational thinking of youth.

• Curriculum research is needed that will begin to furnish some answers to the question of what kinds of formal course experiences are most likely to lead to the specified goals or behavioral outcomes of vocational education. Despite all the discussion about needed curricular changes, very few studies have yet been designed with this sort of cause-effect relationship in mind.

• The average working life expectancy for American high school girls today is approximately 25 years. Yet many of these young women have seriously underdeveloped work motivation. There is an urgent need for research on cultural variables, both within and outside the school setting, that may be utilized to accelerate vocational readiness in girls.

• The quality of commitment that a vocational education student may have to vocational planning, and the attitude that he shelters toward work in general and his vocational curriculum in particular, will depend upon a variety of life history and background

factors that are frequently unclear to his teachers and which, indeed, may not yet be well understood by occupational research workers.

Studies are needed, therefore, which investigate the comparative effects of selective life experiences, such as history of parental unemployment, parents' occupation, values held by the peer group, etc., upon such indicators of vocational development as level of occupational aspiration, accuracy of occupational knowledge, and strength of career planning motivation.

• We continue to assume in normal economic life that the intellectual traits of the individual, such as his aptitudes and trained skills, are the only important personal variables that contribute to occupational success or failure. However, research has long shown that personality and character traits are at least as important in occupational success and advancement as the cognitive traits.

• A good deal of pressure exists to encourage culturally disadvantaged youths to enter vocational education programs inasmuch as they often seem not to prosper in purely academic or college preparatory programs. Yet such disadvantaged youths have often been exposed to background variables which are serious deterrents to success in any type of formal training program, including a vocational education program. Through research we need to identify those factors related to restricted socioeconomic status which limit the youth's promise as a trainee.

• New types of post-secondary but sub-collegiate occupational specialties have recently been emerging, such as computer programmer, computer technician, social worker aide, and psychiatric aide, on which very little empirical research has yet been done and about which little is known. If vocational training programs in such new fields are to avoid some of the pitfalls experienced in older fields of vocational training, systematic and intensive research will need to be designed to identify important worker trait requirements so that curriculum development and vocational counseling can proceed on a sounder and better informed basis.

• Guidance within vocational education has not prospered in the past for many reasons, notably for the reason that relations and communication between vocational educators and counselors have hardly been ideal. Research is now needed that will focus on a study of interpersonal relations and attitudes between the members of these two fields. What, for example, is the vocational educator's concept of the counselor? Who is he? What does he do? Conversely, what is the counselor's stereotyped impression of the vocational educator?

• It is unfortunately true that the typical training of the counselor does not equip him to work effectively in the setting of the vocational, or technical school. In fact, his training may often bias him unwittingly against the values of vocational education programs. Research can and should be done on the relation of the counselor's socioeconomic background and professional training to his occupational attitudes and values.

• Since some students who enter vocational education curricula do not readily think in terms of long-range goals, the strategy of instruction should include the scheduling of frequent, short-term recognitions and rewards. In this connection the current work in reinforcement counseling, growing out of behavior modification theory, seems most promising.

Important Information Source

This report on the national seminar on guidance in vocational education is an important source of information that should have value to all vocational guidance workers. The report contains a wealth of material, much of it prepared by nationally known authorities in various academic disciplines and governmental offices. As it would be difficult to quickly absorb all of the contents, permanent acquisition of the document is recommended.

The reader is sure to find some interesting and provocative commentaries and pronouncements among the presentations and discussion reports. The wide divergence of background among seminar participants and the many points of view expressed should help to precipitate feelings of identification or reaction among readers, which may in turn provoke further thought and action.

Social Readiness for Employment

7:18 "DEVELOPMENT OF A JUNIOR HIGH SCHOOL INSTRUMENT FOR APPRAISING SOCIAL READINESS FOR EMPLOYMENT" BY VIVIAN E. TODD AND ZELPHA BATES. CALIFORNIA STATE COLLEGE AT LONG BEACH, LONG BEACH, CALIF. (PROJECT # 5-8462) 1967. (VT # 003-235) 84 PAGES.

What are the attitudes or beliefs that stand in the way of job getting and job holding? Is it possible to identify some of those that are critical? Can an instrument be devised to appraise the presence or absence of such beliefs? These are the basic questions asked in this developmental study.

The two-fold concerns of this project were: (a) an exploration of the critical factors in the development of an appraisal device for schools serving disadvantaged communities, and (b) the development of an instrument for appraising or teaching groups of students regarding social readiness for employment.

The general design of the project was developed in accordance with the following methodological organization:

—Identify areas of social readiness for employment through interviews with selected personnel managers and on the basis of related literature.

—Work with junior high school personnel, identifying the level of indices appropriate for junior high students.

—Develop an appraisal form suitable for evaluating readiness for employment.

—Devise appropriate items for two forms of the instrument and arrange them using random numbers.

—Administer the instruments to groups of junior high school girls in each of two schools.

—Conduct statistical analyses and, through interviews, study validity of responses to the instrument.

On the basis of interviews of selected people in business, industry and schools and the *Handbook for Young Workers* published by the U. S. Department of Labor, a two-part instrument was devised ("Where Is It Done?" and "What To Do?"). The project reported that student responses obtained in junior high schools serving disadvantaged communities showed the items were appropriate in differentiating among such student groups. It was concluded that the instrument developed is useful for describing the current status of a group of junior high school students in its social readiness for employment.

"Thus, it is an aid to a teacher taking students from where they are to a greater understanding of the social aspects of employment."

Junior College Study

7:19 "SELECTED CHARACTERISTICS, SOCIOECONOMIC STATUS AND LEVELS OF ATTAINMENT OF STUDENTS IN PUBLIC JUNIOR COLLEGE OCCUPATION-CENTERED EDUCATION" BY JOHN W. HAKANSON. UNIVERSITY OF CALIFORNIA, BERKELEY, CALIF. (PROJECT # 6-8420) 1967. (VT # 003-958) 47 PAGES.

"The public junior college has moved far indeed from the original concept of an institution offering the first two years of undergraduate study. . . . Where fully developed it is no longer a junior or 'beginning' college but an institution responsive to many needs of the people in its locale, truly a community college." With these introductory statements, the report identifies the need for studying the backgrounds, qualities and qualifications of people taking occupation-level courses.

Three purposes are given for the University of California study:

1. To determine whether the relationship between low socioeconomic status and low educational attainment holds when the criterion of achievement is completion of a two-year occupation-centered curriculum in a public college.

2. To examine the extent of shifting of occupational and educational goals and to compare students who enroll directly from high school in two year, occupation-centered programs with those who first enroll in college credit transfer programs and then later change their programs.

3. To describe students in two-year occupation-centered curricula in public junior colleges in terms of selected variables: socioeconomic status, scholastic aptitude, course of study pursued in high school, and sex.

Institutional Settings

Six public junior colleges were selected for the investigation. Four of these were located in Midwestern states of Missouri, Kansas, Illinois, and Michigan. The other two were in California.

Data from the High School Graduate Study, previously conducted by Leland Medsker and James Trent of the University of California, were used in this research. The Medsker and Trent study was designed to survey the general intellectual, psychological and social characteristics of some 10,000, 1959 high school graduates, and to examine factors influencing attendance and persistence in college.

Data concerning personal and social characteristics and educational background were collected by questionnaire in 1959 while these students were still in high school. Information obtained for the follow-up of those in the original survey group consisted of records of performance and retention in post-secondary education as well as employment status.

Treatment of Data

Nine specific questions were framed to satisfy the first objective of this study, which is to describe students in terms of certain characteristics and attributes. These questions are:

—What proportion of these students originate from each of several socioeconomic levels?

—What is the mean and range of their scholastic aptitude scores?

—What proportion of these students falls into each of several levels of scholastic aptitude?

—What is the distribution of these students among different courses of study followed in high school?

—How do men and women differ according to these variables?

—How do students in each of a number of major categories of occupational centered curricula differ in terms of socioeconomic status, scholastic aptitude, course of study in high school, and sex?

—To what extent do students in two-year occupation-centered curricula in public junior colleges differ from graduating high school seniors in terms of these variables?

—How do those who complete a two-year occupation-centered curriculum differ from those who start but do not finish, in terms of socioeconomic status, scholastic aptitude, course of study followed in high school and sex?

—How do those who enter a two-year occupation-centered curriculum directly from high school as a first choice differ from those who enter as a second choice, in terms of the above variables?

The basic method of analysis was to make a series of comparisons of groups of students, each one in terms of a number of selected variables, testing each comparison for significance. Further analysis consisted of percentage conparisons of subgroups in an attempt to discover different relationships between variables. Where the data permitted, cross-classification of three variables was also carried out.

The results of the investigation are treated in considerable detail. From a discussion of the extent of basic shifts in program, a conclusion drawn is that the study points to potentially serious trouble for the junior college movement.

"First, it is apparent that the junior college may well fail to meet society's need for really large numbers of technicians unless it can: (a) entice more high school graduates directly into occupation-centered curricula, or (b) succeed in getting much larger proportions of potential academic program dropouts to swifch to terminal programs rather than withdraw.

"Second, unless public junior college enrollees can be brought to a better understanding of their own responsibility for the degree to which they commit themselves to success in their chosen courses of study, they and their parents may hold the college rather than themselves responsible for failure."

"PLAIN TALK"

RESEARCH AND DEVELOPMENT PROJECTS reported in this issue focus attention on three general categories: computer-assisted systems of information gathering and counseling; career development theory and practice, and college and university institutes and instructional programs designed to prepare or upgrade counselors in the vocational aspects of guidance. Other important themes treated are the national seminar for developing guidelines, and the University of California investigation of the status, characteristics and levels of attainment of students taking occupational-level courses in junior colleges.

The systems approach to guidance was the main theme of two projects headed by Campbell and Cogswell. All of the other studies had sections dealing with one or more aspects of computer-assisted guidance work: job information retrieval, analysis of personal and educational qualities in students, and computerized teaching and man-machine counseling.

There was a consensus that school guidance programs would be strengthened through the judicious use of data processing methods for the collection and organization of job and student information, and for the reduction of clerical activities by counselors. However, some deep concerns were expressed about the projected role of the computer in the total guidance function. It was feared that heavy reliance on man-machine systems would cause some counselors to lose their ability to relate with students.

Questions were raised about the value of using the computer to match people to jobs, which has been suggested in some circles. Both the occupational information retrieved and the taxonomy of personal traits and abilities that could be attributed toward predicting job success would always be limited in scope and depth. They would be far too general and incomplete for making individual prescriptions.

Dangers to Students

In Cogswell's investigation of "Information-Processing Procedures and Computer-Based Technology in Vocational Education," there are a series of statements which warn the reader about the "nonhumanistic" effects the computer may have on guidance. Commenting that man-machine systems are intended to provide more counselor time with students, the investigators state that they may lead only to more counselor time with data. Three specific dangers to students who are counseled by computer are cited in this study: possible invasion of privacy; the misuse of predictive systems, and the alienation of people.

Career development, or vocational development as it is sometimes called, is rapidly becoming an instrument for change in guidance and curriculum. After a period in which career development was mainly a theoretical concept, it is

now becoming an integral part of the curriculum plan for many schools and districts.

The implications of career development theory and practice to vocational education are tremendous. Not only will this student-centered approach to guidance and education help insure that many more young people develop realistic concepts and goals, but it should also help to eliminate the gulf that has existed between the so-called fields of preparatory and terminal education.

The term *career development* has been defined as a series of experiences, decisions and interactions which, taken cumulatively, result in the formulation of a self-concept and provide the means by which that self-concept can be implemented through vocation and avocation. Common elements associated with career development are: self and community awareness; experience in simulated and real situations; the capacity for planning and decision making, and willingness to take purposeful action.

Common Elements

Although a good share of career development theory has emanated from the behavioral sciences, it is interesting to note that many of the principles and goals are closely related to those of vocational education. These include the development of self-concept, experience in real life situations, realistic planning and decision-making, the individualization of instruction, all intrinsic elements of any good program of vocational education. There may be some semantic differences, but the overall purpose is virtually identical.

If the vocational or practical arts teacher has missed the opportunity to become acquainted with the theoretical rationale for career development, or with some of the plans for its implementation that are now taking shape, this is the time to correct the deficiency. As the person best equipped through background and experience to effectively apply the principles of career development into the shop and classroom, the teacher of practical subjects should be actively involved in the whole process, and not be a sideline observer.

Many college and university programs to prepare guidance counselors are currently in a process of reconstruction. There is increased emphasis upon the behavioral studies and a corresponding reduction in the number of courses on counseling methods and techniques. The trend is toward the provision for a more extensive theoretical base, capped off by an extended period of supervised internship.

Another new development in the preparation of guidance counselors, one that has received considerable attention in the studies reported here, is the movement toward a multidisciplinary team approach to guidance. The theory supporting this move is that guidance work handled exclusively by former teachers tends to inhibit and stereotype the process. Innovative practices, it is contended, may more likely be developed by group interaction of persons with diverse experiences and points of view. The fields of sociology, psychology, government service, and commercial personnel work are frequently mentioned as additional sources for the pupil personnel team.

Missing Ingredient

When the U.S. Office of Education sponsored studies are viewed in retrospect, it is apparent that a most important phase of vocational guidance has not been treated. This is job placement.

The placement of prepared and qualified persons in productive employment is a rewarding climax to the whole process of vocational orientation and education. It is so pivotal to the ultimate career success of individuals that the position of the placement counselor should be thoroughly studied. It would be good to know, for example, what the placement counselor needs to know about such things as the job market, labor laws, employment practices, and job-seeking techniques.

The process of placement also needs attention. What are the most effective techniques for establishing and maintaining an effective job placement and follow-up program to best help students make the great transition from school to work?

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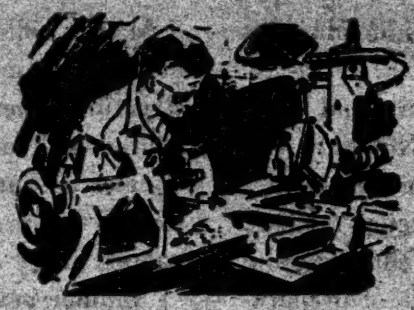

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